

DES MOINES WATER WORKS
Board of Water Works Trustees



2201 George Flagg Parkway | Des Moines, Iowa 50321 | (515) 283-8700 | www.dmwv.com

April 29, 2019

CON: 12-15
Doc # 36437

Bruce Trautman
Acting Director
Iowa Department of Natural Resources
Wallace State Office Building
502 East 9th Street, 4th Floor
Des Moines, IA 50319-0034

RECEIVED MAY 02 2019

Subject: PFAS Contamination at Des Moines Air National Guard Base

Dear Mr. Trautman:

Recently the Board of Water Works Trustees of the City of Des Moines, Iowa ("Board") received a copy of the Final Site Inspection Report for Perfluorooctane Sulfonate and Perfluorooctanoic Acid at Des Moines Air National Guard Base dated March 2019. A copy of this report is provided along with this letter. This report shows significant Per- and Polyfluoroalkyl Substances ("PFAS") contamination in the soil, ground water, and surface water at the Guard Base located at the Des Moines International Airport. It also shows these contaminants are leaving the Guard Base in surface water runoff, in some cases at concentrations nearly 100 times the EPA health advisory level for drinking water of 70 nanograms per liter.

At least one of the stormwater outfalls on the Guard Base (Outfall 004 in the March 2019 report) drains to Frink Creek, which flows into the Raccoon River less than 3 river-miles upstream from Des Moines Water Works' surface water intake. This intake is a critically important part of the water supply infrastructure in Des Moines, without which it would be difficult or even impossible to supply drinking water to more than 500,000 central Iowans each day. Frink Creek's discharge is also exposed to nearly three miles of Des Moines Water Works' infiltration gallery, which is located in the alluvial aquifer adjacent to the Raccoon River. According to the EPA, these chemicals "are persistent, and resist degradation in the environment," so once they are introduced into the environment they are prone to bioaccumulation in living organisms. As a result, there is reason to be concerned about PFAS moving from the Guard Base to Frink Creek to Des Moines Water Works' raw and finished water supply.

Des Moines Water Works collected four samples on March 28, 2019, and had them analyzed for PFAS compounds by the State Hygienic Laboratory. Samples were collected from our finished water, our infiltration gallery source, the Raccoon River, and Frink Creek in Water Works Park where it approaches the Raccoon River. The finished water, infiltration gallery, and Raccoon River samples showed no detectable levels of PFAS. The sample taken from Frink Creek showed levels of PFAS compounds over 10 times in excess of the EPA health advisory level for drinking water. Copies of the analytical reports are enclosed.

Movement of these contaminants, which evidence shows can lead to adverse human health effects, into the Raccoon River is a serious concern which must be addressed. The Board asks that the Iowa Department of Natural Resources ("IDNR") take immediate steps to stop the movement of these contaminants off this site and into our sources of drinking waters in accordance with Part 4 of Division IV of Iowa Code Chapter 455B.


The current contamination at the Guard Base and airport presents immediate and potential danger to public health and the environment. IDNR has authority under Chapter 455B to begin immediate efforts to remediate the contamination at the site. See Iowa Code §§ 455B.31, *et. seq.* Remediation can be accomplished by treating the contamination on site, by treating surface water flows as they leave the site, by redirecting surface water flows from the site away from Frink Creek, or by other means deemed appropriate by the Department.

In addition, IDNR has the ability to compel the Air National Guard, National Guard Bureau, and Department of Defense to take appropriate action based on the Resource Conservation and Recovery Act ("RCRA"), Comprehensive Environmental Response Compensation, and Liability Act ("CERCLA"), and the Clean Water Act ("CWA"). See 42 U.S.C. §§ 6903, 6972 (RCRA); 42 U.S.C. §§ 9601, 9613 (CERCLA); 33 U.S.C. §§ 1362, 1365 (CWA). IDNR is a "person" within the meaning of those statutes, and therefore capable of invoking the citizen suit provisions in order to obtain compensation for remediation required at the Guard Base.

Now that we and IDNR are aware of the contamination, we believe a prompt response is necessary in order to safeguard public health. The Board respectfully requests that the Department respond to this letter advising of the Department's approach and timeline for resolution of this issue.

Please feel free to contact me if you have questions or comments.

Sincerely,



Ted Corrigan, P.E.
Interim CEO and General Manager

Encl.

cc. Ed Tormey, Acting Environmental Services Division Administrator
Mary Mindrup, USEPA Region 7
Daniel Cook, Environmental Specialist Senior, Contaminated Sites Section
Des Moines International Airport Authority Board

Attachment 1

A copy of:

***"Final Site Inspection Report for Perfluorooctane Sulfonate and Perfluorooctanoic Acid
at Des Moines Air National Guard Base," March 2019***

is available upon request.

Collection Location raccoon river		Collector mitchell jeff	Client Reference dmww	Accession # 786847	
PWS ID/PWS Name IA7727031 DES MOINES WATER WORKS		Collected 2019-03-28 11:45	Received 2019-03-28 15:13	Project	
Report To	TERRY WEBSTER DES MOINES WATER WORKS 2201 GEORGE FLAGG PKWY DES MOINES, IA 50321-1190			Facility ID 04	Sampling Pt ID 04
				SDWA Sample Type SP - Special	Sample Category Chemical
				Sample Type Drinking Water	
				Sample Note(s) 1	

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (ug/L)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
<i>Perfluorinated Compounds, EPA 537</i>			2
Perfluorooctanesulfonic acid (PFOS)	<0.016	0.016	
Perfluorooctanoic acid (PFOA)	<0.016	0.016	
Perfluorobutanesulfonic acid (PFBS)	<0.016	0.016	
Perfluorohexanesulfonic acid (PFHxS)	<0.016	0.016	
Perfluoroheptanoic acid (PFHpA)	<0.016	0.016	
Perfluorononanoic acid (PFNA)	<0.016	0.016	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.
2. This sample contained particulate and was centrifuged and decanted prior to sample preparation.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Perfluorinated Compounds, EPA 537	2019-04-08 19:19 NJB	3200	2019-04-11 16:36 SJM	Test 3
2. Prep for Perfluorinated Compounds, EPA 537	2019-04-04 16:28 NJB	3200	2019-04-11 14:44 SJM	
3. Prep for Perfluorinated Compounds, EPA 537	2019-04-02 08:11 NJB	3200	2019-04-11 14:44 SJM	

DESCRIPTION OF UNITS

ug/L = Micrograms per Liter

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Susie Yuan Dai, Ph.D., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory. If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500.

Collection Location frink creek	Collector mitchell jeff	Client Reference dmww	Accession # 786848	
PWS ID/PWS Name IA7727031 DES MOINES WATER WORKS	Collected 2019-03-28 11:30	Received 2019-03-28 15:13	Project	
Report To	TERRY WEBSTER DES MOINES WATER WORKS 2201 GEORGE FLAGG PKWY DES MOINES, IA 50321-1190		Facility ID 04	Sampling Pt ID 04
			SDWA Sample Type SP - Special	Sample Category Chemical
			Sample Type Drinking Water	
			Sample Note(s) 1	

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (ug/L)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
Perfluorinated Compounds, EPA 537			2
Perfluorooctanesulfonic acid (PFOS)	0.59	0.016	
Perfluorooctanoic acid (PFOA)	0.031	0.016	
Perfluorobutanesulfonic acid (PFBS)	0.039	0.016	
Perfluorohexanesulfonic acid (PFHxS)	0.31	0.016	
Perfluoroheptanoic acid (PFHpA)	<0.016	0.016	
Perfluorononanoic acid (PFNA)	<0.016	0.016	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.
2. This sample contained particulate and was centrifuged and decanted prior to sample preparation.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Perfluorinated Compounds, EPA 537	2019-04-08 19:36 NJB	3200	2019-04-11 16:36 SJM	Test 2
2. Prep for Perfluorinated Compounds, EPA 537	2019-04-02 08:11 NJB	3200	2019-04-11 14:44 SJM	
3. Prep for Perfluorinated Compounds, EPA 537	2019-04-04 16:28 NJB	3200	2019-04-11 14:44 SJM	

DESCRIPTION OF UNITS

ug/L = Micrograms per Liter

SITE(S) PERFORMING TESTING

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Collection Location lab tap	Collector mitchell jeff	Client Reference dmww	Accession # 786852	
PWS ID/PWS Name IA7727031 DES MOINES WATER WORKS	Collected 2019-03-28 12:00	Received 2019-03-28 15:13	Project	
Report To TERRY WEBSTER DES MOINES WATER WORKS 2201 GEORGE FLAGG PKWY DES MOINES, IA 50321-1190	Facility ID 04		Sampling Pt ID 04	
	SDWA Sample Type SP - Special		Sample Category Chemical	
	Sample Type Drinking Water			
	Sample Note(s) 1			

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Perfluorinated Compounds, EPA 537			2
Perfluorooctanesulfonic acid (PFOS)	<0.016	0.016	
Perfluorooctanoic acid (PFOA)	<0.016	0.016	
Perfluorobutanesulfonic acid (PFBS)	<0.016	0.016	
Perfluorohexanesulfonic acid (PFHxS)	<0.016	0.016	
Perfluoroheptanoic acid (PFHpA)	<0.016	0.016	
Perfluorononanoic acid (PFNA)	<0.016	0.016	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.
2. Sample matrix effects were observed in the analysis of this sample.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Perfluorinated Compounds, EPA 537	2019-04-08 19:52 NJB	3200	2019-04-11 16:36 SJM	Test 2
2. Prep for Perfluorinated Compounds, EPA 537	2019-04-02 08:11 NJB	3200	2019-04-11 14:44 SJM	
3. Prep for Perfluorinated Compounds, EPA 537	2019-04-04 16:28 NJB	3200	2019-04-11 14:44 SJM	

DESCRIPTION OF UNITS

ug/L = Micrograms per Liter

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Susie Yuan Dai, Ph.D., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location gallery	Collector mitchell jeff	Client Reference dmww	Accession # 786853	
PWS ID/PWS Name IA7727031 DES MOINES WATER WORKS	Collected 2019-03-28 12:10	Received 2019-03-28 15:13	Project	
Report To TERRY WEBSTER DES MOINES WATER WORKS 2201 GEORGE FLAGG PKWY DES MOINES, IA 50321-1190	Facility ID 04	Sampling Pt ID 04		
	SDWA Sample Type SP - Special	Sample Category Chemical		
	Sample Type Drinking Water			
	Sample Note(s) 1			

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Perfluorinated Compounds, EPA 537			
Perfluorooctanesulfonic acid (PFOS)	<0.016	0.016	
Perfluorooctanoic acid (PFOA)	<0.016	0.016	
Perfluorobutanesulfonic acid (PFBS)	<0.016	0.016	
Perfluorohexanesulfonic acid (PFHxS)	<0.016	0.016	
Perfluoroheptanoic acid (PFHpA)	<0.016	0.016	
Perfluorononanoic acid (PFNA)	<0.016	0.016	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Perfluorinated Compounds, EPA 537	2019-04-08 20:42 NJB	3200	2019-04-11 16:36 SJM	Test 3
2. Prep for Perfluorinated Compounds, EPA 537	2019-04-04 16:28 NJB	3200	2019-04-11 14:44 SJM	
3. Prep for Perfluorinated Compounds, EPA 537	2019-04-02 08:11 NJB	3200	2019-04-11 14:44 SJM	

DESCRIPTION OF UNITS

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